segment sequence being related to said second segment sequence by an index; and

an encryption module, for encrypting said re-sequenced information stream segments and said index

REMARKS

In the Office Action, the Examiner noted that claims 1-29 are rejected, claims 11, 13, 15-18 and 19-22 are objected to, and claim 6 was not examined. By this amendment, claims 19-21 are canceled, claims 1, 6-9, 11, 13-15, 22-24 are amended, and claims 2-5, 10, 12, 16-18, and 25-29 continue unamended.

In view of both the amendments presented above and the following discussion, the applicants submit that none of the claims now pending in the application is obvious under the provisions of 35 U.S.C. §103. Furthermore, the applicants also submit that all of these claims now satisfy the requirements of 35 U.S.C. §112. Thus, the applicants believe that all of these claims are now in allowable form.

Objections to the Specification

The Examiner has objected to the disclosure (per comment 1 of the Office Action) due to additional letters and missing words dispersed throughout the application. In response, and in conformance with the Examiner's requirements, the specification has been amended to delete the additional words and to insert missing words and letters. Therefore, the applicants respectfully request that the Examiner's objections to the specification be withdrawn.

Objections to the Claims

The Examiner has objected to claims 15-18 and claims 19-22 under 37 C.F.R. §1.75 as being a substantial duplicate thereof. In view of the cancellation of claim 21 and the amendment of claim 22 so that it now depends on claim 15, the Examiner's objection is deemed to be moot.

Therefore, the applicants respectfully request that the Examiner's objections to claims 15-18 and claims 19-22 be withdrawn. It should be noted that claim 18 differs from claim 22 in that claim 18 discusses "accessing … decrypted information stream segments" while claim 22 discusses "accessing … encrypted information stream segments."

The Examiner has objected to claim 13 being in improper dependent form. In response, the applicants have amended claim 13. Therefore, the applicants respectfully request that the Examiner's objection to claim 13 be withdrawn.

The Examiner has objected to claim 11 due to an identified informality. In response, the applicants have amended claim 11 to correct the identified informality. Therefore, the applicants respectfully request that the Examiner's objection to claim 11 be withdrawn.

Rejection of Claims 6-9 and 14 Under 35 U.S.C. §112

The Examiner has rejected claims 9 and 14 (per comment 6 of the Office Action as being unpatentable under 35 U.S.C. §112, ¶1, as containing subject matter which was not described in the specification. The applicants disagree. However, claims 9 and 14 have been amended to include terminology expressly provided by the specification, rather than the inherently provided terminology in the unamended

claims. Having made these changes, the applicants submit that claims 9 and 14, as they now stand, fully satisfy the requirements of 35 U.S.C. §112, ¶1.

The Examiner has rejected claims 6-9 (per comment 8 of the Office Action) as being unpatentable under 35 U.S.C. §112, ¶2, as being indefinite for failing to particularly point out and distinctly claim the subject matter which the applicants regard as the invention. In response, claims 6-9 have been amended to address the limitations noted by the Examiner as failing to particularly point out and distinctly claim the subject matter.

Rejection of Claims 1-29 Under 35 U.S.C. §103

The Examiner has rejected claims 1-29 (per comments 12-19 of the Office Action) as being unpatentable over the Walker patent (United States Patent No. 5,014,310 issued May 7, 1991) in view of Inoue patent (United States Patent No. 5,195,134, issued March 16, 1993). The applicants respectfully traverse.

The Walker patent discloses a method and apparatus of scrambling adjacent lines of a video signal such that chrominance and luminance features of the video signal are maintained. That is, the Walker patent addresses the problem of chrominance leakage of a 3.58 Mhz local color sub-carrier reference signal into the chrominance information of the video lines applied to a descrambled video line.

The Inoue patent discloses an apparatus for transmitting a scrambled video and audio signal via a satellite wherein the audio portion of the signal contains channel, start/end time and standard time information of programs. A video tape recorder can record programs based

on the information contained in the audio portion of the signal.

The Walker patent and Inoue patent, either singly or in combination, fail to disclose or suggest the invention of claim 1 as follows:

> "A method for securing an information stream comprising a sequence of information frames, said method comprising the steps of:
> segmenting said information stream into a plurality of information stream segments having a first segment sequence, each of said information stream segments comprising a plurality of information frames;
> compressing said information frames forming said information stream segments;
> re-sequencing said information stream segments to produce a re-sequenced information stream having a second segment sequence, said first segment sequence being related to said second segment sequence by an index; and
> encrypting said re-sequenced information stream and said index."

In contrast to the above-quoted claim language, both the Walker and Inoue arrangements fail to disclose or even remotely suggest "segments comprising a plurality of information frames," much less the processing of such multi-frame segments according to the claimed steps of "comprising" "resequencing" and "encrypting." Rather, the Walker arrangement provides a plurality of segments, each comprising two video lines within a video frame. Similarly, the Inoue arrangement provides the shuffling video lines. Thus, to the extent that segments are taught in the prior art, the taught segments merely comprise adjacent video lines within a frame, not the claimed "plurality of information frames."

The Examiner argues that Walker provides, "a method of scrambling video data that consists of rearranging pieces

of video data using an encryption keystream as a guide. The keystream corresponds roughly to applicants' index." The applicants disagree.

Walker takes adjacent video lines, i.e., an odd video line and an even video line, cuts the video lines at a certain point then shuffles the video lines so that an adjacent odd video line is connected to an adjacent even video line. The next group of video lines will go through the same procedure except where the lines are cut will be at a different point. The keystream data provides the point where the video lines are cut. This has nothing to do with the claimed invention.

The Walker arrangement suffers from a problem solved by the subject invention, namely the avoidance of a correlation among information segments. Specifically, the Walker arrangement provides for resequencing a video line, whereby an odd video line segment is connected to an adjacent even video line segment. Knowing this, a video pirate, as the Walker patent describes, in order to analyze the video information to determine a cut point and generate a keystream, "... would have to delay the input scrambled television signal in order to offset the delay in the provisioning of the keystream to the video timing and address control unit" (column 8, lines 42-44). It is noted that the Inoue arrangement also shows correlation among video line segments, and is also vulnerable thereby.

Since the present invention provides no correlation among information segments, a video pirate cannot examine the video signal for cut points and try to generate an index table. The claimed index identifies the correct order of packets such that the segmented packets can be reassembled at the subscriber. Without the index table, it

would be extremely difficult to recreate the segments in the correct order.

Since the references, either singly or in combination, fail to disclose or suggest the claimed invention, it is respectfully submitted that the invention of claim 1 is patentable over the cited references. Moreover, since independent claims 23 and 24 include limitations similar to those found in independent claim 1, it is submitted that claims 23 and 24 are patentable for at least the reasons discussed above with respect to claim 1. Therefore, the applicants submit that claims 1, 23 and 24, as they now stand, fully satisfy the requirements of 35 U.S.C. §103 and are patentable thereunder.

Dependent claims 2-22 and 25-29 depend from claim 1 or 23 and recite additional features therefore. As such, and for the exact same reasons set forth above, the applicants submit that none of these claims are obvious with respect to the teachings of the cited reference. Therefore, the applicants submit that all of these dependent claims also fully satisfy the requirements of 35 U.S.C. §103 and are patentable thereunder.

CONCLUSION

If, however, the Examiner believes that there are any unresolved issues requiring adverse final action in any of the claims now pending in the application, it is requested that the Examiner telephone Mr. Eamon J. Wall, Esq. at 732-530-9404 so that appropriate arrangements can be made for resolving such issues as expeditiously as possible.

Respectfully submitted,

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